

*Claims:*

1. An apparatus for managing a digital certificate on a distributed computing system, the apparatus comprising:  
at least one reception software module that receives a request from a user and generates a reception event  
5 corresponding to that request;  
at least one processing software module,  
communicatively coupled to the at least one reception software module and responsive to a propagated event, that performs an action regarding the management of the digital  
10 certificate;  
any one of the software modules replaceable with another software module responsive to the same propagated event but performing another action regarding the management of the digital certificate; and  
15 the software modules executing independently from one another.
2. The apparatus of claim 1, wherein the reception software module is implemented in a computing system  
20 independent manner.
3. The apparatus of claim 2 wherein the reception software module is implemented in Java.
- 25 4. The apparatus of claim 1 wherein one of the at least one processing software modules is a sink bean.
5. The apparatus of claim 4 wherein the sink bean is a certificate generation bean.
- 30 6. The apparatus of claim 1 wherein one of the at least one processing software modules publishes information regarding the management of the certificate.

7. The apparatus of claim 6 wherein the one of the at least one software modules publishes information in an LDAP directory.

58. The apparatus of claim 1 wherein two of the software modules operate on different computing devices.

9. A computer program product on a computer usable medium, the computer usable medium having a computer usable program embodied therein for managing a digital certificate on a distributed computing system, the computer usable program including:

instructions for receiving a request from a user and generating a reception event corresponding to that request;

15 instructions for performing an action regarding the management of the digital certificate, the instructions for performing communicatively coupled to the instructions for receiving and responsive to a propagated event;

any one of the instructions replaceable with another set of instructions responsive to the same propagated event but performing another action regarding the management of the digital certificate; and

the instructions executing independently from one another.

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10. The computer program product of claim 9, wherein the instructions for receiving are implemented in a computing system independent manner.

30 11. The computer program product of claim 10 wherein the instructions for receiving are implemented in Java.

12. The computer program product of claim 9 wherein instructions for performing are a sink bean.

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15. The computer program product of claim 14 wherein the  
instructions for performing publishes information in an LDAP  
10 directory.

15 17. A method for managing a digital certificate on a distributed computing system, the method comprising:

- receiving a request from a user in at least one reception software module;
- generating a reception event corresponding to that request;
- performing an action regarding the management of the digital certificate in response to a received event in an at least one processing software module, the at least one processing software module communicatively coupled to the at least one reception software module;
- any one of the software modules replaceable with another software module responsive to the same propagated event but performing another action regarding the management of the digital certificate; and

30 the software modules executing independently from one another.

18. The method of claim 17, wherein the reception software module is implemented in a computing system independent manner.

520. The method of claim 17 wherein one of the at least one processing software modules is a sink bean.

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15 23. The method of claim 22 step of publishing is publishing  
to an LDAP directory.

20

25 corresponding to that request;

30 certificate;

35 software module; and

the software modules executing independently from one another.

26. The apparatus of claim 25, wherein the plurality of reception software modules are implemented in a computing system independent manner.

27. The apparatus of claim 26 wherein the plurality of reception software modules are implemented in Java.

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28. The apparatus of claim 25 wherein one of the at least one processing software modules generates a digital certificate.

15 29. The apparatus of claim 25 wherein one of the at least one processing software modules publishes information regarding the management of the certificate.

30. A computer program product on a computer usable medium, the computer usable medium having a computer usable program embodied therein for managing a digital certificate on a distributed computing system, the computer usable program including:

25 a plurality of instructions for receiving a request from a user and generating a reception event corresponding to that request;

one or more instructions for performing an action regarding the management of the digital certificate, the instructions for performing communicatively coupled to the instructions for receiving and responsive to a propagated event;

any one of the instructions for receiving replaceable with another instruction for receiving responsive to a different format request and generating the reception event;

35 and

the instructions executing independently from one another.

31. The computer program product of claim 30, wherein the plurality of instructions for receiving are implemented in a computing system independent manner.

32. The computer program product of claim 31 wherein the plurality of instructions for receiving are implemented in Java.

33. The computer program product of claim 30 wherein the one or more instructions for performing generates a digital certificate.

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34. The computer program product of claim 30 wherein the one or more instructions for performing publishes information regarding a digital certificate.

20 35. A method for managing a digital certificate on a distributed computing system, the method comprising:

receiving a request in a first format from a user in one of a plurality of reception software modules;

25 generating a reception event corresponding to that request;

performing an action regarding the management of the digital certificate in response to a received event in at least one processing software module, the at least one processing software module communicatively coupled to the plurality of reception software modules;

30 any one of plurality of reception software modules replaceable with another reception software module responsive to a request in a second format and generating the reception event; and

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37. The method of claim 36 wherein the plurality of reception software modules are implemented in Java.

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15 39. The method of claim 35 further comprising publishing  
information regarding the management of the certificate in  
one of the at least one processing software modules.

40. An apparatus for managing a digital certificate on a  
20 distributed computing system, the apparatus comprising:  
at least one reception software module that receives a  
request from a user and generates a reception event  
corresponding to that request;

at least one processing software module,  
25 communicatively coupled to the at least one reception  
software module and responsive to a propagated event, that  
performs an action regarding the management of the digital  
certificate;

at least one transmission software module,  
30 communicatively coupled to the at least one processing  
software module, that transmits information regarding the  
digital certificate on the distributed computing system in a  
first format in response to a propagated event;

the at least one transmission software module replaceable with another reception software module responsive to the same event that the the replaced transmission software module is responsive to, and  
5 transmitting information in a second format; and

the software modules executing independently from one another.

41. The apparatus of claim 40, wherein the at least one  
10 reception software module and the at least one transmission software module are implemented in a computing system independent manner.

42. The apparatus of claim 41 wherein the at least one  
15 reception software module and the at least one transmission software module are implemented are implemented in Java.

43. The apparatus of claim 40 wherein one of the at least  
20 one processing software modules generates a digital certificate.

44. The apparatus of claim 40 wherein one of the at least  
one processing software modules publishes information regarding the management of the certificate.

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45. A computer program product on a computer usable medium, the computer usable medium having a computer usable program embodied therein for managing a digital certificate on a distributed computing system, the computer usable program  
30 including:

instructions for receiving a request from a user and generating a reception event corresponding to that request;

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one or more instructions for performing an action regarding the management of the digital certificate, the instructions for performing communicatively coupled to the instructions for receiving and responsive to a propagated event and generating an event;

a first instructions for transmitting information in a first format regarding the digital certificate on the distributed computing system in a first format in response to a propagated event, the instructions communicatively coupled to the at least one processing software module;

the first instructions for transmitting replaceable with a second instructions for transmitting, the second instructions for transmitting responsive to the same event that first instructions were responsive to and transmitting information regarding the digital certificate in a second format; and

the instructions executing independently from one another.

46. The computer program product of claim 45, wherein the first instructions for transmitting and the second instructions for transmitting are implemented in a computing system independent manner.

47. The computer program product of claim 46 wherein the first instructions for transmitting and the second instructions for transmitting are implemented in Java.

48. The computer program product of claim 45 wherein the one or more instructions for performing generates a digital certificate.

49. The computer program product of claim 45 wherein the one or more instructions for performing publishes information regarding a digital certificate.

50. A method for managing a digital certificate on a distributed computing system, the method comprising:

receiving a request in a first format from a user in  
5 one or more reception software modules;  
generating a reception event corresponding to that  
request;  
performing an action regarding the management of the  
digital certificate in response to a received event in an at  
10 least one processing software module, the at least one  
processing software module communicatively coupled to the  
plurality of reception software modules;  
transmitting information regarding the digital  
certificate in a first format from a first transmission  
15 software module upon the reception of a propagated event;  
the first transmission software module replaceable with  
a second transmission software module, the second  
transmission software module responsive to the propagated  
event and transmitting information regarding the digital  
20 certificate in a second format; and  
the software modules executing independently from one  
another.

51. The method of claim 50, wherein the first transmission  
25 software module and the second transmission software module  
are implemented in a computing system independent manner.

52. The method of claim 51 wherein the first transmission  
software module and the second transmission software module  
30 are implemented in Java.

53. The method of claim 50 further comprising generating a  
certificate in one of the at least one processing software  
module.

54. The method of claim 50 further comprising publishing information regarding the management of the certificate in one of the at least one processing software modules.